Please enter the following amendments and remarks.

The following <u>Listing of the Claims</u> will replace all prior versions and all prior listings of the claims in the present application:

1-57   (canceled)

58.   (currently amended) A method of diagnosing human osteoarthritis (OA) , comprising determining ~~the~~a level of RNA transcripts <u>of each of Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); Calmodulin 1 (CALM1); and Laminin, gamma 1 (LAMC1);</u> in a cartilage sample from an individual suspected of having or being afflicted with OA, ~~wherein the RNA transcripts are expressed from two or more genes which are~~ ~~differentially expressed in OA cartilage as compared with normal cartilage as identified~~ ~~in Table 6, wherein said two or more genes are selected from the group consisting of~~ ~~Beta 2 Microglobulin (B2M); Tumour Necrosis Factor Alpha induced Protein~~ ~~(TNFAIP6); B cell CLL/lymphoma 6 (zinc finger protein 51) (BCL6); Cyclin C~~ ~~(CCNC); Interleukin 13 receptor alpha 1 (IL13RA1); Laminin, gamma 1 (LAMC1);~~ ~~MAFB/Kreisler basic region/leucine zipper transcription factor (MAFB); Period 1~~ ~~(PER1); Calmodulin 1 (CALM1); Translationally Controlled Tumour Protein (TCTP),~~ and comparing said level of <u>each of</u> said RNA transcripts with ~~the~~a level of expression of said RNA transcripts in a cartilage sample from one or more individuals not having OA, wherein differential expression of said ~~two or more~~ RNA transcripts is indicative of the disease OA.

59.   (canceled)

60.   (currently amended) A method of diagnosing mild human osteoarthritis (OA), comprising determining ~~the~~a level of RNA transcripts <u>of each of Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); Calmodulin 1 (CALM1); and Laminin, gamma 1</u> <u>(LAMC1);</u>, in a cartilage sample from an individual suspected of having or being afflicted with mild OA, ~~wherein the RNA transcripts are expressed from two or more~~ ~~genes which are differentially expressed in mild OA cartilage as compared with non-mild~~

~~OA cartilage as identified in Table 6, wherein said two or more genes are selected from the group consisting of Beta-2 Microglobulin (B2M); Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); B-cell CLL/lymphoma 6 (zinc finger protein 51) (BCL6); Cyclin C (CCNC); Interleukin 13 receptor alpha 1 (IL13RA1); Laminin, gamma 1 (LAMC1); MAFB/Kreisler basic region/leucine zipper transcription factor (MAFB); Period 1 (PER1); Calmodulin 1 (CALM1); Translationally Controlled Tumour Protein (TCTP),~~ and comparing the level of said RNA transcripts with ~~the~~ a level of expression of said RNA transcripts in a cartilage sample from one or more individuals not having mild OA, wherein differential expression of said two or more RNA transcripts is indicative of the disease mild OA.

61.   (canceled)

62.   (canceled)

63.   (canceled)

64.   (canceled)

65.   (canceled)

66.   (currently amended) A method of diagnosing severe human osteoarthritis (OA) comprising determining ~~the~~ a level of RNA transcripts of each of Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); Calmodulin 1 (CALM1); and Laminin, gamma 1 (LAMC1); in a cartilage sample from an individual suspected of having or being afflicted with severe OA, ~~wherein the RNA transcripts are expressed from two or more genes which are differentially expressed in severe OA cartilage as compared with non-severe OA cartilage as identified in Table 6, wherein said two or more genes are selected from the group consisting of Beta-2 Microglobulin (B2M); Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); B-cell CLL/lymphoma 6 (zinc finger protein 51) (BCL6); Cyclin C (CCNC); Interleukin 13 receptor alpha 1 (IL13RA1); Laminin, gamma 1 (LAMC1); MAFB/Kreisler basic region/leucine zipper transcription factor~~

(MAFB); Period 1 (PER1); Calmodulin 1 (CALM1); Translationally Controlled Tumour Protein (TCTP), and comparing ~~the~~ said level of said RNA transcripts with ~~the~~a level of expression of said RNA transcripts in a cartilage sample from one or more individuals not having severe OA, wherein differential expression of said ~~two or more~~ RNA transcripts is indicative of the disease severe OA.

67.   (canceled)

68.   (previously presented) The method of any one of claims 58, 60, or 66, further comprising the step of isolating RNA from said cartilage sample.

69.   (canceled)

70.   (canceled)

71.   (canceled)

72.   (canceled)

73.   (currently amended) The method of any one of claims 58, 60, or 66, wherein the step of determining ~~the~~ said levels of said RNA transcripts in said cartilage sample from said individual suspected of having or being afflicted with OA, comprises hybridizing a nucleic acid sample from said cartilage sample ~~comprising or corresponding to said RNA transcripts from an individual suspected of having or being afflicted with OA,~~ to an array comprising a ~~solid~~ substrate and a plurality of nucleic acid members, ~~wherein at least two of said nucleic acid members are differentially expressed in cartilage isolated from a patient diagnosed with osteoarthritis as compared to cartilage isolated from a normal individual,~~ wherein each nucleic acid member is attached to a distinct addressable location ~~of a substrate has a unique position and is stably associated with the solid~~ said substrate, and wherein hybridization of said nucleic acid sample to said ~~differentially expressed~~ nucleic acid members results in a determination of said levels of said RNA transcripts.~~is indicative of osteoarthritis.~~

74.   (currently amended) A method of diagnosing human osteoarthritis (OA), comprising determining ~~the~~ a level of RNA transcripts <u>from each of Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); Calmodulin 1 (CALM1); and Laminin, gamma 1 (LAMC1);</u> in a cartilage sample from an individual suspected of having or being afflicted with OA <u>so as to derive an expression pattern</u>, ~~where the RNA transcripts are expressed in plurality of the genes identified in Table 6 as being differentially expressed in OA cartilage as compared with normal cartilage, wherein said plurality of genes are selected from Beta 2 Microglobulin (B2M); Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); B-cell CLL/lymphoma 6 (zinc finger protein 51) (BCL6); Cyclin C (CCNC); Interleukin 13 receptor alpha 1 (IL13RA1); Laminin, gamma 1 (LAMC1); MAFB/Kreisler basic region/leucine zipper transcription factor (MAFB); Period 1 (PER1); Calmodulin 1 (CALM1); Translationally Controlled Tumour Protein (TCTP),~~ and comparing ~~the~~ <u>said expression pattern</u> ~~level of said RNA transcripts~~ with <u>one or more control expression patterns derived from a</u> level of expression of said RNA transcripts in a cartilage sample from one or more control individuals, ~~wherein the expression pattern of said plurality of RNA transcripts in said individual suspected of having OA~~ <u>wherein said comparison results in a determination that said individual has</u>~~is indicative of the disease~~ <u>OA</u>.

75.   (currently amended) A method of diagnosing mild human osteoarthritis (OA), comprising determining ~~the~~ <u>a</u> level of RNA transcripts <u>from each of Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); Calmodulin 1 (CALM1); and Laminin, gamma 1 (LAMC1);</u> in a cartilage sample from an individual suspected of having or being afflicted with mild OA, <u>so as to derive an expression pattern</u> ~~where the RNA transcripts are expressed from a plurality of the genes identified in Table 6 as being differentially expressed in mild OA cartilage as compared with non-mild OA cartilage, wherein said plurality of genes are selected from Beta 2 Microglobulin (B2M); Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); B-cell CLL/lymphoma 6 (zinc finger protein 51) (BCL6); Cyclin C (CCNC); Interleukin 13 receptor alpha 1 (IL13RA1); Laminin, gamma 1 (LAMC1); MAFB/Kreisler basic region/leucine zipper transcription factor (MAFB); Period 1 (PER1); Calmodulin 1 (CALM1); Translationally Controlled~~

~~Tumour Protein (TCTP),~~ and comparing ~~the said~~ level of ~~said RNA transcripts with the~~ said expression pattern with one or more control expression patterns derived from a level of expression of said RNA transcripts in a cartilage sample from one or more ~~individuals not having mild OA,~~control individuals, wherein said comparison results in a determination that said individual has ~~the expression pattern of said plurality of RNA transcripts in said individual suspected of having mild OA is indicative of the disease~~ mild OA.

76.   (currently amended) A method of diagnosing severe human osteoarthritis (OA), comprising determining ~~the~~a level of RNA transcripts from each of Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); Calmodulin 1 (CALM1); and Laminin, gamma 1 (LAMC1); in a cartilage sample from an individual suspected of having or being afflicted with severe OA, ~~where the said~~ RNA ~~transcripts are expressed from a plurality of the genes identified in Table 6 as being differentially expressed in OA cartilage as compared with non-severe OA cartilage, wherein said plurality of genes are selected from Beta 2 Microglobulin (B2M); Tumour Necrosis Factor Alpha-induced Protein (TNFAIP6); B-cell CLL/lymphoma 6 (zinc finger protein 51) (BCL6); Cyclin C (CCNC); Interleukin 13 receptor alpha 1 (IL13RA1); Laminin, gamma 1 (LAMC1); MAFB/Kreisler basic region/leucine zipper transcription factor (MAFB); Period 1 (PER1); Calmodulin 1 (CALM1); Translationally Controlled Tumour Protein (TCTP),~~ so as to derive an expression pattern and comparing ~~the said~~ level of ~~said RNA transcripts with the~~ said expression pattern with one or more control expression patterns derived from a level of expression of said RNA transcripts in a cartilage sample from one or more control individuals ~~not having severe OA, wherein the expression pattern of said plurality of RNA transcripts in said individual suspected of having severe OA~~ wherein said comparison results in a determination that said individual has ~~is indicative of the disease~~ severe OA.

77.   (canceled)

78.   (canceled)

79.   (canceled)